

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:

Andreas Bacher et al.

Serial No.: 10/552,678

Filed: October 10, 2005

For: Use Of Silane-Functional Polyvinyl Alcohols in
Priming Agents For Separating Papers and Films

Attorney Docket No.: WAS 0708 PUSA

Group Art Unit: 1796

Examiner: Olatunde S. Ojurongbe

AMENDMENT UNDER 37 C.F.R. § 1.111

Mail Stop Amendment
Commissioner for Patents
U.S. Patent and Trademark Office
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

Responsive to the Office Action dated August 13, 2008, kindly amend the above-identified application as follows:

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Claims 1 - 7. (Cancelled)

8. (Currently Amended) ~~[[In a]]~~ A process for the preparation of release films and coatings on a substrate by applying a primer to the substrate and then applying a silicone release coating, ~~the improvement~~ comprising,

~~selecting as~~ applying a primer~~[[,]]~~ comprising at least one silane-containing polyvinyl alcohol derived from fully or partly hydrolyzed vinyl ester copolymers having a degree of hydrolysis of 75 to 100 mol%, obtained by free-radical polymerization of

- a) one or more vinyl esters of unbranched or branched alkylcarboxylic acids having 1 to 18 carbon atoms, of which a fraction of 1 to 30 mol%, based on total polymer, are one or more 1-alkylvinyl esters of carboxylic acids having 1 to 6 carbon atoms, wherein the alkyl radicals have 1 to 6 carbon atoms,
- b) 0.01 to 10 mol% of one or more silane-containing, ethylenically unsaturated monomers, and, optionally,
- c) further comonomers copolymerizable therewith,

and hydrolyzing the resultant polymers, and

applying over the primer, a silicone release coating.

9. (Previously Presented) The process of claim 8, wherein the silane-containing polyvinyl ester copolymer is a copolymer of vinyl acetate.

10. (Previously Presented) The process of claim 8, wherein said 1-alkylvinyl esters are selected from the group consisting of 1-methylvinyl acetate, 1-ethylvinyl acetate, and 1-propylvinyl acetate, and mixtures thereof.

11. (Previously Presented) The process of claim 8, wherein the silane-containing polyvinyl alcohol is obtained by copolymerizing one or more ethylenically unsaturated, silane-containing monomers selected from the group consisting of ethylenically unsaturated silicon compounds of the formula (I) $R^1SiR_{0-2}^2(OR^3)_{1-3}$, where R^1 is $CH_2=CR^4-(CH_2)_{0-3}$ or $CH_2=CR^4CO_2(CH_2)_{1-3}$, R^2 is a C_1 to C_3 alkyl radical, C_1 to C_3 alkoxy radical, or halogen, R^3 is an unbranched or branched, unsubstituted or substituted alkyl radical having 1 to 12 carbon atoms, or is an acyl radical having 2 to 12 carbon atoms, R^3 optionally interrupted by an ether group, and R^4 is H or CH_3 , and meth(acrylamides) containing silane groups, of the formula (II) $CH_2=CR^5-CO-NR^6-R^7-SiR_m^8-(R^9)_{3-m}$, where $m = 0$ to 2 , R^5 independently is H or a methyl group, R^6 is H or an alkyl group having 1 to 5 carbon atoms, R^7 is an alkylene group having 1 to 5 carbon atoms or a divalent organic group in which the carbon chain is interrupted by an O or N atom, R^8 is an alkyl group having 1 to 5 carbon atoms, and R^9 is an alkoxy group having 1 to 40 carbon atoms, optionally substituted by heterocycles.

12. (Previously Presented) The process of claim 11, wherein the silane-containing polyvinyl alcohol is obtained by copolymerizing one or more ethylenically unsaturated, silane-containing monomers selected from the group consisting of γ -acryloyl- and γ -methacryloyl-oxypropyltri(alkoxy)silanes, α -methacryloyloxymethyltri(alkoxy)silanes, γ -methacryloyloxypropylmethyldi(alkoxy)silanes, vinylalkyldi(alkoxy)silanes, and vinyltri(alkoxy)silanes.

13. (Previously Presented) The process of claim 12, wherein at least one alkoxy group is selected from the group consisting of methoxy, ethoxy, methoxyethyleneoxy ethoxyethyleneoxy, methoxypropyleneoxy and ethoxypropyleneoxy radicals.

14. (Previously Presented) The process of claim 8, wherein 0.01 to 1.5 mol% of ethylenically unsaturated, silane-containing monomers are copolymerized.

15. (Previously Presented) A release film or paper, comprising: a substrate, a primer coat applied to the substrate, and a silicone release coating applied over the primer, wherein the primer comprises a primer of claim 8.

16. (Previously Presented) A release film or paper comprising a substrate, a primer coat applied to the substrate, and a silicone release coating applied over the primer, wherein the primer comprises at least one silane-containing polyvinyl alcohol derived from fully or partly hydrolyzed vinyl ester copolymers having a degree of hydrolysis of 75 to 100 mol%, obtained by free-radical polymerization of

- a) one or more vinyl esters of unbranched or branched alkylcarboxylic acids having 1 to 18 carbon atoms, of which a fraction of 1 to 30 mol%, based on total polymer, are one or more 1-alkylvinyl esters of carboxylic acids having 1 to 6 carbon atoms, wherein the alkyl radicals have 1 to 6 carbon atoms,
 - b) 0.01 to 10 mol% of one or more silane-containing, ethylenically unsaturated monomers, and, optionally,
 - c) further comonomers copolymerizable therewith,
- and hydrolyzing the resultant polymers.

17. (Currently Amended) The process of claim 8, wherein the primer consists essentially of at least one silane-containing polyvinyl alcohol based on fully or partly hydrolyzed vinyl ester copolymers having a degree of hydrolysis of 75 to 100 mol%, obtained by free-radical polymerization of

- a) one or more vinyl esters of ~~unbranched~~ unbranched or branched alkylcarboxylic acids having 1 to 18 carbon atoms, of which a fraction of 1 to 30 mol%, based on total polymer, are one or more 1-alkyl-vinyl esters having alkyl radicals having 1 to 6 carbon atoms, and of carboxylic acids having 1 to 6 carbon atoms,
- b) 0.01 to 10 mol% of one or more silane-containing, ethylenically unsaturated monomers, and, if desired,

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c) further comonomers, copolymerizable therewith, and hydrolysis of the resultant polymers, and

d) optionally, pigments, polyvinyl alcohols other than a silane-containing polyvinyl alcohol, carboxymethylcellulose, starch, starch derivatives, alginates, proteins, aqueous polymer dispersions based on (meth)acrylic acid, (meth)acrylic esters, acrylonitrile, vinyl acetate, butadiene, styrene, plasticizers, and catalysts.